REMARKS

Claims 23-45 were pending as of the action mailed on August 28, 2006.

Claim 39 is being amended. No new matter has been added.

Reexamination and reconsideration of the action are requested in light of the foregoing amendments and the following remarks.

In the Office Action mailed by the Examiner, all claims were rejected under 35 U.S.C. § 103(a). In particular, in section 8 of the Office Action, independent claims 23, 31, 39, and 40 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Meyer (U.S. 5,867,733) in view of Ohran (U.S. 5,649,152).

Claim 23 reads as follows:

> 23. A storage device controller, comprising:
> snapshot logic;
> copy logic; and
> an internal cache;
> the controller being operable to communicate with *a replication manager* to receive a snapshot command issued by *the replication manager*, the snapshot command specifying a range of data bytes of a source volume;
> the controller being operable to communicate with *the replication manager* to receive a copy command specifying the source volume and a target volume;
> the controller being operable to receive a write command specifying the source volume;
> the snapshot logic being operable, in response to the snapshot command, to take a snapshot of the range, the snapshot including a snapshot map and snapshot data, the snapshot map being stored by the snapshot logic in the internal cache and the snapshot data being stored by the snapshot logic in a snapshot volume; and
> the copy logic being operable in response to receiving the copy command to generate and send one or more storage device commands to one or more storage devices for the source and target volumes to copy data from the source volume directly to the target volume without having a file server in the data path, the copy logic using the snapshot map and the snapshot data to maintain coherency of the copied data. [Emphasis added]

Applicants respectfully direct the Examiner to Figure 1 of the Application regarding replication manager 110. Specifically, the detailed description discloses "Fig. 1 shows a system

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100 for performing coherent device to device copy operations between data storage device controllers. This process is managed by a replication manager 110 which communicates with a plurality of data storage device controllers." (Page 5, lines 19-22).

Applicants respectfully submits that neither Meyer or Ohran disclose a *replication manager*. Specifically, the term "replication manager" is not taught or suggested by the cited references.

Meyer discloses a personal computer transferring data to hard disks, tape drives, or CD-ROMs by using an Enhanced IDE (EIDE) interface. Specifically, the data transfer is a "direct transferring of data from one mass storage device, such as a hard disk drive, to another storage device, without first storing the data in a main memory . . . ." (Meyer, col. 3, lines 61-64). Further, in particular, Meyer is silent regarding a *replication manager* that is recited by independent claim 23:

> the controller being operable to communicate with *a replication manager* to receive a snapshot command issued by *the replication manager*, the snapshot command specifying a range of data bytes of a source volume;
> the controller being operable to communicate with *the replication manager* to receive a copy command specifying the source volume and a target volume . . . .

Thus, Applicants submit that no suggestion of the teachings of the claimed invention is to be found in Meyer.

Regarding Ohran, the reference discloses using a "preservation memory" to store blocks of data that provides access to the data instead of a mass storage device, which also stores the blocks of data. Data writes are described as being "intercepted" and stored in the preservation memory for later read access, thereby avoiding visiting the slower mass storage device to access the blocks of data. (See Ohran, col. 2, lines 52-64). What Ohran does not disclose or suggest is a *replication manager* that issues snapshot commands.

Accordingly, Applicants respectfully submit that one of ordinary skill could not combine Meyer and Ohran to realize the claim invention because neither reference teaches or suggests a *replication manager*. Further, since Meyer and Ohran are silent regarding a *replication manager*, the motivation to combine the references is absent.

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The Applicants submit that all independent claims are allowable. All dependent claims are allowable for at least the reason that they depend from allowable independent claims. Favorable action is respectfully solicited.
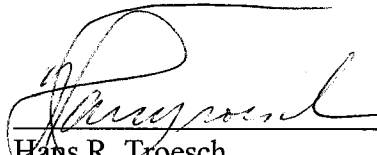
Conclusion

For the foregoing reasons, the applicant submits that all the claims are in condition for allowance.

By responding in the foregoing remarks only to particular positions taken by the examiner, the applicant does not acquiesce with other positions that have not been explicitly addressed. In addition, the applicant's arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist.

Please apply any charges or credits, including a charge for a one-month extension of time, to deposit account 06-1050.

Respectfully submitted,

Date: 09 Dec 06

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